

March 6.—George Newport, Esq., President, in the Chair.

Mr. Edward Doubleday exhibited a volume of drawings of Lepidopterous larvæ, executed by the grandson of the late Mr. Standish. Also two plates of Indian *Lepidoptera* (*Charaxes*, sp.) since published in the 'Annales' of the Entomological Society of France.

Mr. F. Bond exhibited specimens of *Polyommatus Arion* and *Anthroceræ Loti*, taken at Barnewall Wold, Northamptonshire, in July 1842.

Mr. Westwood exhibited an extensive series of *Goliath* Beetles of the genera *Rhomborhina* and *Trigonophorus*, from the collection of the Rev. F. W. Hope, including several new species recently obtained in a large collection of Indian insects. Also a drawing of a larva received from J. Walton, Esq., as that of a species of *Bruchus* found in the interior of beans, but which Mr. Westwood regarded as a lepidopterous larva (possessing four pairs of ventral and one pair of anal prolegs, in addition to six thoracic feet). No lepidopterous larva had however been hitherto observed possessing such habits.

A letter was read from W. Spence, Esq., relative to the action of the pulvilli of flies and other insects capable of walking upon upright or inverted planes of glass, &c.

"Descriptions of some new species of *Alcides* (a genus of *Curculionidæ*) from the Philippine Islands." By G. R. Waterhouse, Esq.

GEOLOGICAL SOCIETY.

Feb. 21, 1844, *continued*.—The following papers were read:—

"Remarks on *Sternbergia*." By Mr. J. S. Dawes.

The author considers the fossils of this anomalous genus of extinct vegetables as merely casts of the medullary cavities of exogenous trees, similar to that at Darlaston, lately described. The transverse plates which compose the interior of some of these borders, he considers as agreeing with the laminæ of the pith; and the rings on the external surface of others as produced by the same cause. He described specimens in which the so-called *Sternbergia* formed the centre or pith of fossil stems.

"On a Fossil Crustacean from New Holland." By Prof. Thomas Bell.

This, the only fossil crustacean as yet found in Australia, was procured by Lieutenant Emery, and forwarded by Mr. W. S. Macleay, who considered it as probably a *Thalassina*. Prof. Bell regards it as a new *Thalassina*, nearly allied to the only known living species of that genus, and names it *T. antiqua*.

March 6.—A paper was read, entitled, "Contributions to the Geology of North Wales." By Mr. Daniel Sharpe.

The observations contained in this memoir were made during a tour through a large part of North Wales, with the object of endeavouring to ascertain what beds lie below the Silurian rocks which have been described by Mr. Murchison, and whether any organic remains are to be found in them. Mr. Sharpe enters into full particulars on the geology of many localities, commencing at Llangollen,

in the district examined by Mr. Bowman, and working gradually westward. The details do not admit of a brief abstract. In comparing the Silurian formations of North Wales with those of Shropshire, &c., Mr. Sharpe calls attention to the prevalence of slaty cleavage in the former, to the greater thickness of the Welsh formations, and to the scarcity of organic remains in North Wales in beds which elsewhere are crowded with fossils. He concludes by some observations on slaty cleavage.

A Note, by the Curator, on the fossil species of *Criseis*, discovered by Prof. Sedgwick and Prof. Ansted, was also read at this meeting.

March 20.—The following papers were read:—

1. "Report on the Collection of Fossils from Malta and Gozo, presented by Lieut. Spratt, R.N." By the Curator.

From an examination and comparison of the fossils, it would appear that the Maltese Islands are formed of tertiary strata of the Miocene period, from which there are between eighty and ninety species of organic remains in the Society's collection.

2. "On the Origin of the Gypseous and Saliferous Marls of the New Red Sandstone." By the Rev. David Williams.

The author gives an account of a section through the west end of Worle Hill, near Weston-super-Mare, which he considers throws important light on the origin of the marls in question. He classes them among formations of volcanic origin.

3. Extract of a Letter addressed to the Rev. Dr. Buckland, by Mr. W. C. Trevelyan, "On some remarkable Fractured Pebbles from Auchmithie, near Arbroath."

These pebbles are found in the old red conglomerate, and consist of granite, porphyry, gneiss, jasper and reddish quartz. They are fractured and contorted in a remarkable manner, and present appearances of softenings, and of adhesions subsequent to the fracturing.

April 3.—The following papers were read:—

1. "On the Traces of the Action of Glaciers at Porth Treiddyn, in Caernarvonshire." By Mr. R. W. Byres.

The author notices a number of evidences of glacial action, instances of rounded, polished, furrowed and striated rocks in the neighbourhood of Tremadoc, similar to those observed in several localities around Snowdon by the Rev. Dr. Buckland.

2. "On the occurrence of Fossils in the Boulder Clay." By Mr. R. Harkness.

Fossils are rare in the boulder clay, and are only found in the thicker parts of it. Such portions the author considers as having been deposited in a deep sea, the lower parts of which had a temperature sufficiently warm for the support of organized beings. In the thicker beds the boulders are rounded and polished. Such parts of the clay as are free from fossils, and contain angular boulders, Mr. Harkness considers to indicate the former existence of a shallow sea, with a temperature so cold as to prevent the existence of animal life. Fossiliferous localities occur in the boulder clay of the southwestern parts of Lancashire, where the marl abounds with remains of shells, mostly in a fragmentary state.

3. A letter was read from Dr. Owen Rees on the question of the existence of Fluoric Acid in recent Bones, which the experiments of Dr. Rees would go to disprove. The bones examined by him were tested both before and after calcination, but in no case could he detect the least trace of fluoric acid in recent human bone. In fossil bones it exists in large proportions.

April 17.—The following papers were read:—

1. "Observations on the Geology of the Southern Part of the Gulf of Smyrna and the Promontory of Karabournoo." By Lieut. T. Spratt, R.N.

The author takes up the geology of the neighbourhood of Smyrna at the point where the observations of Messrs. Strickland and Hamilton terminate, and gives a detailed account of the schists and limestones of Mount Corax and Cape Karabournoo, and of the extensive freshwater tertiary formation which borders them on the sea-coast, and is continued into several of the neighbouring islands. He notices the presence of igneous rocks of two distinct ages, viz. serpentine, older than the tertiary, and trap, which had been erupted after the deposition of the tertiary, greatly disturbing, and in places overflowing it. His observations prove the existence at a former period of a great freshwater lake in the eastern part of the Archipelago, where now there is a deep sea.

2. "Note on the Fossils found in the Tertiary Formations described in the preceding paper." By the Curator.

An examination of the fossils found in the freshwater beds, described by Lieut. Spratt, shows that formation to have been deposited during the Eocene period.

3. "On the Remains of Fishes found by Mr. Kaye and Mr. Cunliffe in the Pondicherry Beds." By Sir Philip Grey Egerton, Bart., M.P.

In this paper the author describes fourteen species, mostly new, twelve of which belong to the placoid order, one is a ganoid, and one a cycloid fish. Among them is *Corax pristodontus*, identical with the Maestricht species. From the evidence afforded by the examination of these fishes, Sir Philip Egerton takes the same view of the age of the beds which was inferred by Prof. E. Forbes from the invertebrate remains, considering them as belonging to the cretaceous era, though he is inclined to place them higher in the series.

4. "On the occurrence of a Bed of *Septaria* containing Fresh-water Shells, in the series of the Plastic Clay at New Cross, Kent." By H. Warburton, Esq., M.P., F.R.S., Pres. G.S.

The bed described does not form a continuous stratum, but occurs with interruptions and intervals in the condition of *Septaria*, which contain remains of shells of the genera *Paludina* and *Unio*. A section of the locality, showing the position of the bed, was made by Mr. Simms. In France similar associations of freshwater remains have been noticed in the plastic clay series by M. D'Archiac.

May 1.—The following papers were read:—

1. "Report on the Fossils from S. Fé de Bogota, in South America, presented to the Society by Mr. E. Hopkins." By the Curator. These fossils belong to seventeen species of Mollusca, of which

nine are identical with species from the same locality, described by Von Buch, D'Orbigny, and Lea. They are from a dark compact limestone, which the reporter regards as a member of the lower part of the cretaceous system. Eight of the species are new.

2. "Comparative Remarks on the Sections of the Strata below the Chalk, on the Coast near Hythe in Kent, and Atherfield, in the Isle of Wight." By Dr. Fitton.

In this paper the author enters into an elaborate review of the state of our knowledge of the lower greensand in England, and compares the several deposits and their fossil contents. After commenting on the relations of that formation at Hythe, with the several strata of the Atherfield section, and showing the comparative state of our knowledge of them when he read his memoir on the sub-cretaceous strata in 1824, with the state of the subject at the present day, he proceeds to examine the researches of M. Montmoulin in Switzerland, M. Dubois de Montperreux in the Caucasus, MM. Leymerie and D'Orbigny in France, and M. Roemer in Germany, and to prove the identity of the beds styled by some of those authors Neocomian with his lower greensand. Regarding both names as objectionable, the former on account of its being derived from a locality which will not serve as a type for the formation, and the latter because it implies erroneous relations, he proposes the term "*Vectine*," from the island in which we find the strata of this part of the cretaceous system best displayed.

3. A letter from Mr. Simms was read, noticing the occurrence of Lower Greensand clays resting on the Wealden at the cutting near Jeston turnpike, on the Maidstone line of railway.

4. "On the Section of the Lower Greensand, between Black Gang Chine and Atherfield Point." By Capt. Boscawen Ibbetson and Prof. E. Forbes.

After describing sixty-three distinct strata, presenting a total thickness of 843 feet, which constitute the lower greensand in this section, the results of a chemical examination of the several strata were stated. The strata were grouped under three divisions, the lowest consisting of fossiliferous clays, the middle of Gryphæa sands, and the upper of more or less ferruginous sands, mostly free from fossils. An inquiry was entered into respecting the conditions under which these beds were deposited, and the state of animal life in the cretaceous seas during their formation. The distribution of their fossils was given in detail, and the results of the inquiry stated as proving the unity of the lower greensand, considered as a member of the cretaceous series. Capt. Ibbetson laid before the Society a model of the section, on the scale of three feet to the mile, constructed by himself from trigonometrical survey, on which the several strata described in the paper were laid down minutely.

5. "Description of the mouth of a *Hybodus*, found by Capt. Ibbetson in the Isle of Wight." By Sir Philip Grey Egerton, Bart., M.P.

This fish was found at the junction of the Wealden with the lower greensand. The specimen sets at rest the question of the relative characters of the upper and lower teeth, and the general contour of

the individuals composing the genus *Hybodus*, confirming the views of Prof. Agassiz. The species is new, and Sir Philip Egerton proposes to name it *Hybodus Bassanus*.

6. The President read extracts from letters lately addressed by M. Dubois de Montperreux and by Prof. Agassiz to Capt. Ibbetson, on the subject of the Neocomian. The former of these geologists states that the Neuchatel beds cannot be regarded as complete, or as the type of that formation, which he considers is best developed in the Crimea and Caucasus. The latter considers the Neocomian as a peculiar stage, and that the very lowest of the cretaceous system.

May 15.—The following papers were read:—

1. A letter from Dr. Ick on some new fossil Crustacea, from the South Staffordshire coal-field.

2. "On the Geology of Cape Breton." By Mr. R. Brown.

The newest stratified rocks in the island of Cape Breton belong to the coal formation. The coal-field of Sidney occupies an area of 250 square miles, and appears, from the dip of the beds, to be a portion of a still more extensive field. The coal measures repose on millstone grit of variable thickness and great extent. Beneath the millstone grit lies carboniferous limestone, associated with extensive beds of gypsum and marls. These gypsiferous beds lie upon conglomerates, which pass downwards into slates, corresponding to the grauwacke formation in Europe. In places the eruption of red granite has converted the schists into white marble. Igneous rocks of various forms, granites, porphyries, greenstone and trap, occupy a considerable portion of the island.

3. "On the anthracite formation of Massachusetts." By Mr. Lyell.

The author states that the fossil plants associated with the anthracite of Wrentham, Cumberland and Mansfield on the borders of the States of Rhode Island and Massachusetts, are of true carboniferous species. The strata containing them, as shown by Hitchcock, Jackson and others, pass into mica-schist, clay-slate, and other metamorphic rocks. The bed of plumbago and anthracite, two feet thick, at Worcester, Massachusetts, is separated from the anthracite before mentioned, by a district of gneiss, thirty-five miles wide. This bed Mr. Lyell regards as coal in a still more completely metamorphic state, all the volatile ingredients having been discharged and carbon alone remaining, the accompanying coal-shales and grits having been turned into carbonaceous clay-slate, mica-schist, with granite and quartzite. No similar beds are found in the North American Silurian formations.

MISCELLANEOUS.

CAPTURE OF HEMIPODIUS TACHYDROMUS IN BRITAIN.

To the Editors of the Annals of Natural History.

GENTLEMEN,—I have recently received a bird which appears to me to be new to this country; it is a Quail, having no back toe, and is